Detailed Action

1. The petition filed 4/19/2006 has been rendered moot in view of the agreement reached below.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Naishadh Desai on February 12, 2011.

The application has been amended as follows:

Cancel claims 16-20 and 24-28.

Amend the claims as follows:

1. (Currently Amended) A PNA probe of up to 30 subunits in length comprising a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 or the complement thereof.

10. (Currently Amended) A probe set comprising at least one PNA probe of up to 30 subunits in length wherein one or more of the PNA probes of the set is specific for detecting human chromosome Y and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 or the complement thereof.

21. (Currently Amended) A method comprising:

a) contacting a sample with a PNA probe set, wherein the PNA probe set comprises one or more PNA probes of up to 30 subunits in length wherein one or more of the PNA probes of the set is specific for detecting human chromosome Y and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 or the complement thereof; and

b) detecting, identifying or quantitating hybridization of the probing nucleobase sequence of the PNA probe or probes to the target sequences of the chromosomes and correlating the result with the presence, absence or number of the chromosomes in the sample.

35. (Currently Amended) A set of at least four PNA probes of up to 30 subunits in length wherein:

a) one or more of the PNA probes of the set is specific for detecting human chromosome X and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 1-9 or the complement thereof; and

b) one or more of the PNA probes of the set is specific for detecting human chromosome Y and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 or the complement thereof; and

c) one or more of the PNA probes of the set is specific for detecting human chromosome 18 and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 112-118 or the complement thereof; and

d) one or more of the PNA probes of the set is specific for detecting human chromosome 13/21 and comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 153-159 or the complement thereof.

36. (Currently Amended) A kit for performing an assay comprising:

a) one or more PNA probes of up to 30 subunits in length wherein at least one probe comprises a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 or the complement thereof; and

b) other reagents or compositions necessary to perform the assay.

45. (Currently Amended) A prenatal kit for the multiplex analysis of human chromosomes X, Y, 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18, and 13/21 as a pair, wherein the kit comprises:

a) at least one independently detectable PNA probe of up to 30 subunits in length selected from the group consisting of SEQ ID NOS 1-159 or the complement thereof, wherein at least one probe comprises one of SEQ ID NOS 10-16 or the complement thereof; and

b) other reagents or components suitable to perform the assay.

46. (New) The PNA probe set of claim 10 wherein the set further comprises at least one PNA probe of up to 30 subunits comprising a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 1-9, 17-159, and the complement to any of the foregoing sequences.

47. (New) The method of claim 21 wherein the PNA probe set further comprises at least one PNA probe of up to 30 subunits comprising a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 1-9, 17-159, and the complement to any of the foregoing sequences.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: The claims are directed to PNA probes of up to 30 subunits in length which comprise a probing nucleobase sequence selected from the group consisting of SEQ ID NOS 10-16 as well as method of using them. The claims are allowable over the prior art as the prior art does not teach or fairly suggest PNA probes encompassed by the claims. The term PNA is a term of art and is also defined by the instant specification. Accordingly, the recitation of the PNA structure in the claims is not required for patentability.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jehanne Sitton whose telephone number is (571) 272-0752. The examiner is a hoteling examiner and can normally be reached Mondays, Tuesdays, and Thursdays from 8:00 AM to 2:00 PM, and Fridays from 8:00 AM to 12:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nguyen, can be reached on (571) 272-0731. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

/Jehanne Sitton/
Primary Examiner
Art Unit 1634